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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/954,994	09/18/2001	Sven K. Esche	SIT-0106	2909
26259	7590	06/20/2006	EXAMINER	
LICATA & TYRRELL P.C. 66 E. MAIN STREET MARLTON, NJ 08053			BURCH, MELODY M	
			ART UNIT	PAPER NUMBER
			3683	

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/954,994

Applicant(s)

ESCHE ET AL.

Examiner

Melody M. Burch

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: the phrase "the longitudinal axis" should be reworded since there are several longitudinal axes along which the non-linear spring and the chambers are disposed. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by JP-2000291725 (JP'725).

Re: claim 2. JP'725 shows in figure 2 a device for adaptive vibration attenuation comprising a passive isolator 14a,18,22,28 with a nonlinear force deflection characteristic as disclosed in line 3 of the novelty section of the English abstract wherein the passive isolator comprises a mechanical actuator 14a,18,22,28 which varies an operating point along the force deflection characteristic and is comprised of a coiled spring 28, a load supporting rod 27, a non-linear spring 14a and a means 22 for externally controlling a preload to the coiled spring whereby as the coiled spring force is

varied, the load supporting rod transfers pressure to the non-linear spring via elements 12, 16, and 28 as shown.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6361031 to Shores et al. in view of US Patent 5700000 to Wolf et al.

Re: claim 1. Shores et al. show in figure 1 a device for adaptive vibration attenuation comprising a passive isolator 22 with a force-deflection characteristic and an operating point wherein the passive isolator comprises a pneumatic actuator 44, 62, and the vacuum actuated valves discussed in col. 2 lines 37-38 which varies the operating point of the isolator along the force-deflection characteristic wherein the pneumatic actuator comprises at least one upper pressure chamber 44, a spring 22 (in light of Applicant's remarks on 6/23/03 that the passive isolator is the non-linear spring), and one lower pressure chamber 26 independent of the upper pressure chamber wherein air pressure in the at least one upper pressure chamber can be externally controlled as disclosed in col. 2 lines 31-39 and wherein the natural frequency of the system is regulated by applying pressure to the upper pressure chamber or the lower pressure chamber, particularly the upper pressure chamber. Examiner notes that "upper" and "lower" are relative terms and that for examining purposes the upper portions of the

mount in figure 1 are shown in the area of element 14 and the lower portions of the mount are shown in the area of element 16.

Shores et al. do not disclose that the force-deflection characteristic of the passive isolator 5 is non-linear or that the passive isolator or spring 22 is a non-linear spring.

Wolf et al. teach in figure 6 and in col. 4 lines 30-47 the use of a vibration attenuation device comprising a passive isolator or spring 2 with a non-linear force-deflection characteristic or being characterized as a non-linear spring.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the passive isolator of Shores et al. to have been constructed such that it had a non-linear force-deflection characteristic, as taught by Wolf et al., in order to provide a means of allowing good damping and preventing shaking even at large amplitudes of perturbation as taught by Wolf et al. in col. 4 lines 43-45.

Response to Arguments

6. Applicant's arguments filed 6/13/06 have been fully considered but they are not persuasive.

With regards to claim 1, Applicant argues that Shores, as modified, fails to disclose the limitation wherein "the pneumatic actuator has disposed along the longitudinal axis a non-linear spring, at least one upper pressure chamber and one lower pressure chamber...." Examiner notes that the dotted line in the annotated figure shown on pg. 6 of this action illustrates the limitation of the actuator having disposed

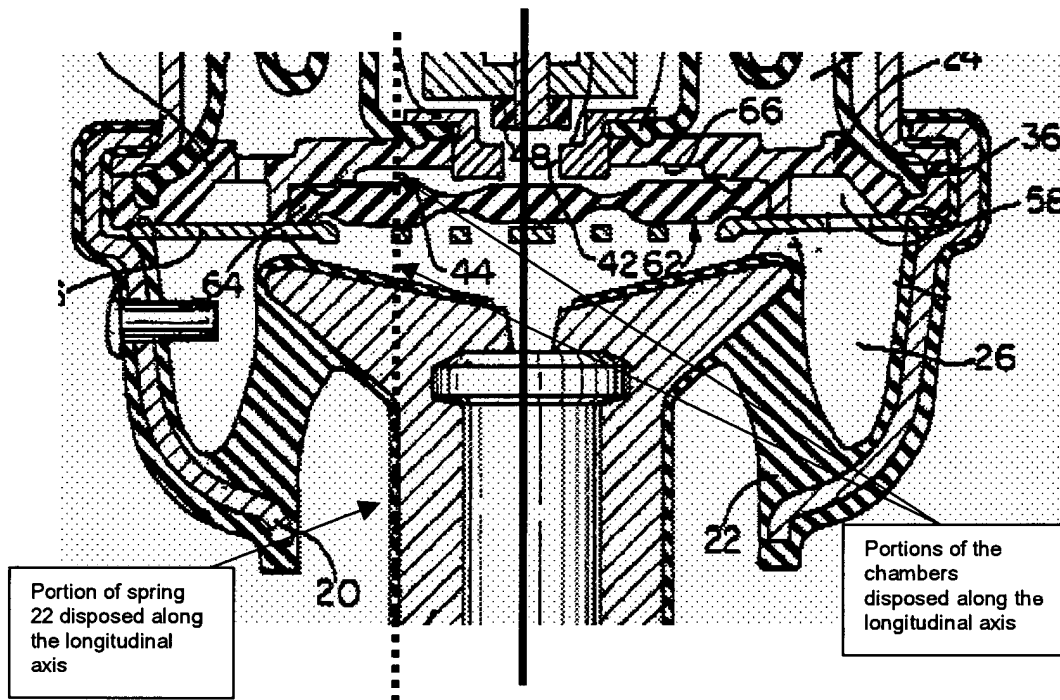
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along the longitudinal axis or dotted line, a spring 22 and at least one upper and lower pressure chambers 44 and 26, respectively.

With regards to claim 2, Applicant argues that JP'725 lacks the limitation of the means for externally controlling the preload to the coiled spring being not in direct contact with the load supporting rod. Examiner presents an alternate interpretation of the JP'725 reference. In the alternate interpretation the load supporting rod is represented by element 27. As shown the means 22 for externally controlling the preload to the coiled spring is not in direct contact with the load supporting rod 18. This newly interpreted arrangement is operative whereby as the coiled spring force is varied, the load supporting rod transfers pressure to the non-linear spring 14a by way of element 12 when element 22 is adjusted to such an extent that element 27 is pressed against element 12 and element 14a by way of element 12.

See Following Page.

Annotated figure showing the dotted longitudinal line



The above rejections have been maintained.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James McClellan can be reached on 571-272-6786. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mmb

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June 16, 2006

Melody M. Burch
Melody M. Burch
Primary Examiner
Art Unit 3683
6/16/06